REMARKS

The Examiner has required restriction between Group I and Group II on the basis that the groups are distinct, and do not relate to a single general inventive concept under PCT Rule 13.1 because under PCT Rule 13.2, they lack the same or corresponding special technical features.

Applicants provisionally elect Group I, as described by the Examiner, for prosecution, with traverse, and offer the following comment.

On it's face, the requirement appears to have been better presented as an election of species, rather than a restriction, since the claims are drawn to only a single category of invention (process claims). In the interest of compact prosecution, should the requirement be changed to an election of species, Applicants would be willing to provisionally elect **with traverse** the species where R^{29} and R^1-R^{27} are **not** Het, with the traversal arguments presented below. This provisional election is with the understanding that if the requirement should be changed to an election of species rather than a restriction, the non-elected species will be examined when the elected species is found to be allowable.

Applicants respectfully traverse for at least the following reasons:

- The restriction requirement is incomplete, since claimed subject matter has not been grouped by the Examiner.
- The claims are directed to a single category of invention.
- The claims define a single special technical feature.
- The lack of unity analysis has been improperly applied to the Markush claim.

The Restriction Requirement is Incomplete

The claims have been grouped by the Examiner into two groups:

Group I encompasses materials where R^{29} is selected from hydrogen, lower alkyl, aryl, halo, cyano, nitro, OR^{19}, $OC(O)R^{20}$, $C(O)R^{21}$, $C(O)OR^{22}$, $NR^{23}R^{24}$, $C(O)NR^{25}R^{26}$, $C(S)NR^{25}R^{26}$, SR^{27}, and $C(O)SR^{29}$, **and** R^1 to R^{18} are each independently alkyl or aryl, **and** R^{19} to R^{29} are each independently hydrogen, lower alkyl or aryl.

Group II encompasses materials where R^{29} is Het **and** R^1 to R^{18} are each Het **and** R^{19} to R^{29} are each Het.

The two groups **do not** encompass claimed processes where, for example:

R^{29} is Het **and** R^1 to R^{18} are each independently alkyl or aryl **and** R^{19} to R^{29} are each independently hydrogen, lower alkyl or aryl;

R^{29} is is selected from hydrogen, lower alkyl, aryl, halo, cyano, nitro, OR^{19}, $OC(O)R^{20}$, $C(O)R^{21}$, $C(O)OR^{22}$, $NR^{23}R^{24}$, $C(O)NR^{25}R^{26}$, $C(S)NR^{25}R^{26}$, SR^{27}, and $C(O)SR^{29}$ **and** R^1 to R^{18} are each Het **and** R^{19} to R^{29} are each Het; or

R^{29} is is selected from hydrogen, lower alkyl, aryl, halo, cyano, nitro, OR^{19}, $OC(O)R^{20}$, $C(O)R^{21}$, $C(O)OR^{22}$, $NR^{23}R^{24}$, $C(O)NR^{25}R^{26}$, $C(S)NR^{25}R^{26}$, SR^{27}, and $C(O)SR^{29}$ **and** where at least one, but not all of R^1 to R^{18} are Het **and** where at least one, but not all of R^{19} to R^{29} are Het.

The restriction requirement is therefore incomplete, since the full scope of the claims is not included in the groups which are presented for election. Therefore Applicants respectfully request reconsideration of the restriction requirement.

The claims are directed to a single category of invention

The examiner quotes 37 CFR 1.475 to support the assertion that the claims lack unity of invention, since the present claims do not fall within the claim types disclosed in 37 CFR 1.475. However, the preamble to 37 CFR 1.475 states clearly "that a national stage application containing claims **to different categories of invention**, will be considered to have unity of invention if the claims are drawn only to one of the following combination of categories."

The present claims are all directed to a single category of invention, specifically the process for the carbonylation of vinyl esters. Therefore, Applicants respectfully request reconsideration and withdrawal of the restriction requirement.

The claims define a single special technical feature

Since the application is a National Stage Application of a previously filed PCT Application, a restriction requires a showing that the claims of the invention do not have a "special technical feature," and therefore have a lack of unity. As stated in the restriction requirement, PCT Rule 13.2 states that "special technical feature" is defined in PCT Rule 13.2 as meaning those technical features that define a contribution which each of the inventions, considered as a whole, makes **over the prior art**.

The restriction requirement does not show how the proposed groups of inventions lack a "special technical feature" since there is no showing of how the claims do not define a contribution **over the prior art**. In this case, all of the compounds disclosed have a common technical feature, the carbonylation of a vinyl ester based on a starting material of a specific structure, with a catalyst ligand having a particular structure. No art is cited in the requirement and no arguments are presented to show that the common technical feature was known in the prior art. For this reason, Applicants respectfully request reconsideration and withdrawal of the restriction requirement.

The lack of unity analysis has been improperly applied to the Markush claim

MPEP 1850(III)B clearly describes the process for the determination of Unity of Invention with regards to Markush claim practice. The relevant section of the MPEP is quoted below:

> The situation involving the so-called Markush practice wherein a single claim defines alternatives (chemical or non-chemical) is also governed by PCT Rule 13.2. In this special situation, the requirement of a technical interrelationship and the same or corresponding special technical features as defined in PCT Rule 13.2, shall be considered to be met when the alternatives are of a similar nature.
>
> When the Markush grouping is for alternatives of chemical compounds, they shall be regarded as being of a similar nature where the following criteria are fulfilled:
>
> (A)All alternatives have a common property or activity; and
>
> (B)(1) A common structure is present, i.e., a significant structural element is shared by all of the alternatives; or

> (B)(2) In cases where the common structure cannot be the unifying criteria, all alternatives belong to a recognized class of chemical compounds in the art to which the invention pertains.

In this case all the alternative compounds have (A) a common property or activity (the carbonylation of a vinyl ester), **and** (B)(1) a common structure, a structural element shared by all of the alternatives.

(B)(1) is further defined in MPEP 1850(III)B:

> In paragraph (B)(1), above, the words "significant structural element is shared by all of the alternatives" refer to cases where the compounds share a **common chemical structure** which occupies a large portion of their structures, or in case the compounds have in common only a small portion of their structures, the commonly shared structure constitutes a structurally distinctive portion **in view of existing prior art**, and the common structure is essential to the common property or activity. The structural element may be a single component or a combination of individual components linked together. (emphasis added)

In this case, the chemical compounds in the claims all have a shared common structure which is structurally distinctive in view of existing prior art (since no prior art is presented), and the common structure is essential to the common property or activity.

Specifically, the vinyl ester of formula (IV) is based upon a vinyl ester core structure having alternative substituents. The vinyl ester core structure is where the claimed process occurs, all of the alternative structures have this in common, and all of the alternative compounds have the same utility (undergoing carbonylation in the claimed process).

Likewise, the alternative compounds of formula (I) also have a common core structure. Specifically, an adjacently-substituted aryl moiety with 4 quaternary substituted carbon atoms bonded through a Q^2-A or Q^1-B group. The quaternary carbons bonded through a Q^2-A or Q^1-B group to a adjacently-substituted aryl moiety are the common structural feature. This structural feature is shared by all of the alternative structures of the claim. All the alternative structures have the same utility (used in combination with the metal to catalyze the carbonylation of the vinyl ester) and the common structural feature constitutes a structurally distinctive portion **in view of existing prior art** (See definition of (B)(1) above).

Therefore, Applicant's respectfully request reconsideration and withdrawal of the restriction requirement.

Conclusion

For these reasons, and in view of the above arguments, Applicants respectfully request reconsideration and withdrawal of the restriction requirement, and examination of the claims as written.

A new set of claims are presented with this response. Claims 1, 30 and 31 have been amended. Claims 32 and 33 are new. Support for these claims is found, for instance, in the paragraph bridging pages 14-15 of the specification. The new claims fall within either Group I (when R^{29} and R^1-R^{27} are **all not** Het) or Group II (when R^{29} and R^1-R^{27} are **all** Het). Therefore, the claims should be examined in light of the elected Group I.

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Respectfully submitted,

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